M. Roczen: Triangle Singularities in Positive Characteristics

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k denotes an algebraically closed field of any characteristic $p \ge 0$. Let $f \in k[[X]]$, $X = (X_0, \ldots, X_n)$ be a (semi-) quasi-homogeneous power series of weight $w = (w_0, \ldots, w_n)$ defining an isolated singularity. We associate w with the rational number s(w) introduced by K. Saito, which is also said to be the singularity index. For $k = \mathbb{C}$, properties of sqh singularities are intensively studied, and sqh singularities of small modality are known.

In arbitrary characteristics, a complete list is available in the case of $s \leq 1$.

This is a proposal to continue the classification of the above mentioned singularities following increasing values of s. We obtain in the interval $(1, \frac{7}{6}]$ the weights of all triangle singularities from the complex analytic case (as well as some other weights).